REMARKS:

This paper is herewith filed in response to the Examiner's Office Action mailed on May 13, 2008 for the above-captioned U.S. Patent Application. This office action is a rejection of claims 1-22 of the application.

More specifically, the Examiner has rejected claims 1, 2, and 22 under 35 USC 103(a) as being unpatentable over by Forssell (EP1006695) in view of Bender (US6,377,814) and Soulabail (US20020071415); rejected claim 3 under 35 USC 103(a) as being unpatentable over Forssell in view of Bender, Soulabail, and further in view of Upp (US2004/0002351); rejected claims 4-5 under 35 USC 103(a) as being unpatentable over Forssell in view of Bender, Soulabail, and further in view of Rinchiuso (US2004/0196861); rejected claim 6 under 35 USC 103(a) as being unpatentable over Forssell in view of Bender, Soulabail, Lechleider, Rinchiuso and in further view of Schieder (EP1139613); rejected claim 7 under 35 USC 103(a) as being unpatentable over Forssell in view Bender, Soulabail, and further in view of of Kajizaki (US2001/0055317); rejected claims 8,9,15-16, and 19 under 35 USC 103(a) as unpatentable over Forssell in view of Cromer (US20030186703); rejected claims 10, and 20-21 under 35 USC 103(a) as being unpatentable over Forssell in view of Cromer and further in view of Lechleider; rejected claim 12 under 35 USC 103(a) as being unpatentable over Forssell in view of Schieder; rejected claim 13 under 35 USC 103(a) as being unpatentable over Forssell in view of Schieder and further in view of Upp; rejected claim 17-18 under 35 USC 103(a) as being unpatentable over Forssell in view of Cromer and further in view of Schieder.

Claims 1-3, 7-8, 12, 15, and 22 have been amended for clarification. Claims 8-14 have been amended for mere formality. Claims 24-30 have been added. Support for the new claims can be found at least on page 2, lines 2-5 and page 9, lines 27-33. No new matter is added.

As amended claim 1 recites:

> A method, comprising: communicating through a dedicated channel comprising both an uplink and a plurality of downlinks; controlling a flow of data packets by

> at least one of a server function and a server in a core network; keeping up the dedicated channel after a last speech sample packet is sent downlink from the core network by sending post-speech packets for a time of such duration that a new uplink can be established utilizing at least one downlink from the core network; and wherein the at least one of the server function and the server in the core network transmits the post-speech packets to the plurality of downlinks after receiving a packet indicating an end of speech samples from the uplink.

The Applicants note that in the Office Action the Examiner rejects all claims as being obvious. The Examiner appears to apply EP 1 006 695 (Forssell) as the closest prior art and he combines with Forssell several other documents. Further, the Applicants note that in the Office Action the Examiner admits in several places that Forssell does not disclose "post-speech packets" of the present application and asserts other references to compensate this deficiency.

Regarding the rejections of independent claim 1 over Forssell in view of Bender and Soulabail , the Applicants disagree with the rejections.

The present application relates to a TDMA system, especially a packet switched system, and a GPRS network. A packet switched system works like a simplex transmission system. All packet transmissions can be considered as one-way transmissions.

An exemplary embodiment of the present invention teaches a method of how to speed up an uplink connection establishment of a mobile terminal in a packet switched network (i.e. in a GPRS network) (i.e. establishing a reverse transmission connection compared to the existing connection). This is accomplished by utilizing "a prolonged downlink" before the utilized downlink is released. In accordance with the present invention, after the last actual downlink speech packet a few post speech packets are transmitted to the downlink. This brings about that the temporary block flow (TBF) is not immediately released after the last actual speech packet. The downlink is released only after the last post-speech packet. The receiving mobile station can therefore utilize "the prolonged downlink" in establishing a new uplink if needed (in a reverse direction). This speeds up the uplink channel establishment considerably.

The document of Forssell also discusses a packet switched network (GPRS network). The object of Forssell is to keep an existing (one-way) connection in a packet switched network reserved so

that a delay is avoided in re-establishing a connection, i.e. the connection has already existed. Forssell discusses about how to prolong a (one-way) connection in a packet switched network over silent (passive) periods in a delay sensitive communication system in an earlier used transmission direction (paragraph [0042]).

However, in the system of Forssell there always exists a given value of about how long the silent (passive) period actually is. This value, which depicts the passive period, the transmitting party sends to the receiving party (Figures 1 and 7 and paragraphs [0067], [0068], [0073] and [0074]). Moreover, the network periodically assigns a sending permission to the mobile station during the passive period (Figure 9 reference 904 and paragraph [0077]). Therefore, there is no need in Forssell to send any surplus packets during the passive period as they would not give any additional information to the receiving party about the length of the passive period. Secondly, possible surplus packets would not matter as it appears the temporary block flow (TBF) is in active state during the whole passive period according to the description of Forssell.

Furthermore, the post-speech packets of the present application are sent in a manner clearly distinguishable from Forssell. The post-speech packets of the present application are sent in the dedicated packet channel. Whereas, in Forssell the terminal informs the network of a need to keep up the connection either by sending a signal embedded in a data header during an active data transmission or a control channel signal during the pause (i.e. a silent period) in a control channel (see [0042]). Embedding data in a header of an ordinary data packet is in any case is distinct from sending a post-speech packet, regardless of the timing.

Further, sending surplus packets during the passive period waste transmission resources in the packet network which is against the essential benefit of the packet switched network of Forssell. Therefore, an ordinary person skilled in the art would not be motivated to send any surplus packets in the system of Forssell during the passive period. Moreover, Forssell is silent about what happens after a last downlink packet or how an uplink could be established.

In addition, the Applicants note the independent claim, as amended, disclose an additional distinguishing feature as compared to Forssell. Accordingly, post-speech packets are sent to a plurality of downlinks. This is seen to be distinguish over Forssell which appears to relate only to

a case where one downlink is active.

In the rejection the Examiner states:

> "Forssell fails to teach keeping up a dedicated channel downlink from a core network by sending post-speech packets for a time of duration, and keeping up a dedicated channel after a last speech sample packet is sent downlink from a core network for a time of such duration that a new uplink can be established utilizing a downiink from a core network. Bender teaches keeping up a dedicated channel downlink from a core network by sending post-speech packets for a time of duration, and Soulabail teaches keeping up a dedicated channel after a last speech sample packet is sent downlink from a core network for a time of such duration that a new uplink can be established utilizing a downlink from a core network."

As stated above, the Examiner applies Bender in the rejection to address a stated limitation that "Forssell fails to teach keeping up a dedicated channel downlink from a core network by sending post-speech packets for a time of duration." It is noted that Bender depicts a method utilized in a CDMA system. Further, the system of Bender is a circuit switched system where the downlink and uplink can be active at the same time (i.e. full-duplex system). Therefore, there is no need to establish an uplink after an end of a downlink transmission as in the present application (as the uplink exists already).

As cited, Bender discloses:

> "In an exemplary embodiment, a wireless network controls supervision time by maintaining a minimum data frame transmission rate to each access terminal in the system. For example, if a maximum-zero-traffic period elapses without a data frame being sent to an access terminal, the wireless network transmits a null data frame to the subscriber station. If an access terminal does not successfully decode any data frame or null data frame on any of its traffic channels for a specified number maximum-zero-traffic periods, the access terminal declares a loss of its connection with the base station and stops transmitting," (col. 3, line 63 to col. 4, line 6).

The Applicants submit that the null data frames of Bender is intended to avoid a releasing of an existing uplink if there has been a long silent period in downlink transmission to the mobile station. Furthermore, the null data frames of Bender are transmitted within an existing connection (i.e. the downlink is still active); not after a last packet transmitted via the downlink to the mobile terminal. Therefore, an ordinary skilled man in the art would not be motivated to combine

Forssell and Bender. Moreover, in an unlikely case that an ordinary man skilled in the art would apply the null data frames of Bender to Forssell, which is not agreed to as proper, he would utilize the idea of the null data frames during the passive period of Forssell; not after the last packet sent downlink in Forssell. The Applicants submit that for at least the reasons stated such a combination would still not disclose or suggest the claims.

The reference Soulabail discloses a time division duplex (TDD) system which is functionally a circuit switched system (i.e. half-duplex system). In the rejection the Examiner has applied "a guard period," of Soulabail, whose length can vary between different transmission directions (downlink and uplink).

Time slots assigned to a base station and a mobile station alternate in the TDD system according to a predefined scheme. In practice the transmission directions alternate so fast that a user of the TDD system experiences the function of the system to be "full-duplex". The Applicants note that due to the functionality of the TDD system a problem of establishing a new connection after an end of a downlink transmission does not exist at all in the system of Soulabail. A new uplink time slot is programmed to be established after an ended downlink time slot.

Based on the above-mentioned facts, the Applicants submit that even if Forssell, Bender and Soulabail were combined, though not agreed to as proper, such a combination would still not disclose or suggest claims 1 and 22. Thus, the rejections of these claims should be removed.

Similarly, as new claim 24 recites features similar to claim 1 the references cited are not seen to disclose or suggest claim 24.

Independent claims 8 and 15 are rejected as being unpatentable over Forssell in view of Cromer (US 2003/0186703).

Firstly, the Applicants note that claims 8 and 15 have been amended for clarification. These claims are seen to be distinguishable from the references for the reasons already stated regarding claim 1.

Cromer deals with conserving battery power (see Abstract, paragraphs [0002] and [0010]) in a WLAN client. The objective is reached by remaining on a lowest bandwidth permitted by the protocol of the client device (Abstract, paragraphs [0010] and [0027]). Only after a data packet addressed to the client device is received, the bandwidth is increased.

Further, the Applicants submit that the ping packets of Cromer would not be needed in Forssell. This is seen to be the case at least for the reasons that Forssell already discloses two methods to keep a channel open; 1) the channel is shared by several mobiles (see [paragraph 0044]) and 2) the network is informed that a passive period follows an active one (Abstract, [paragraph 0041] - [paragraph 0042] and [paragraph 0047]).

In the Office Action the Examiner argues that a process called "pinging" could fulfill the same functions as the post-speech packets of the present application.

Cromer discloses in paragraph [0023]: "Pinging is a periodic transmission of identifier signals between client device 12 and access point 10 that are specific for client device 12, and conform to access point 10 that client device 12 is still wirelessly connected to WLAN 13". And further in paragraph [0027] Cromer discloses: "If packet is not a data packet, the client device continues to run at the lowest bandwidth permissible. For example, if the packet is a ping packet, the client device receives the packet and pings back to the access point to maintain a connection to WLAN while remaining at the lowest bandwidth permissible".

It is submitted that "the pinging" is a process utilized in a situation where "a network controller" checks periodically whether a certain client device is connected to the network. If the client device is connected, it pings back to "the controller". If it is not connected it does not receive the ping packet. A ping packet is client-specific. Therefore, "the network controller" has to send a client-specific ping packet to each client device (par. [0028]). Moreover, the Applicants submit that due to the periodical nature of the ping packet any time-dependent information concerning the specific connection can not be included in a ping packet of Cromer.

It is also evident that in Cromer the client device receives the ping packet on the same packet data channel as it receives the user data packets (although the ping message can be considered as a

signalling message). Therefore, the client device of Cromer also sends the response to the ping packet on a packet data channel. If an ordinary man skilled in the art would transfer the idea of periodic ping packets to the system of Forssell, which is not agreed to as proper, then it would follow that he would also use packet data channels of the GPRS network. It is evident that such a proposed modification of Forssell would increase loading on the packet data channels which is seen to clearly teach away from the idea of allocating all unused resources to other mobiles during the passive period of a specific mobile device.

It is also noteworthy that if the ping packet, such as in Cromer, is transmitted during a passive period of Forssell it may not add anything further to the state of the connection. The Temporary Block Flow (TBF) of the connection in Forssell would appear to need be already active before a ping packet would be sent. If the ping packet is sent after the TBF release has been initiated, then due to the periodic nature of the pinging and the TBF release process, the ping packet may or may not be received in the client device at any time after initiating the TBF. Therefore, it can not be seen how a ping packet of Cromer would be utilized for securing that a TBF release process, in Forssell, such that it could be shifted to later time.

Further, the Applicants note that the amended claims disclose an additional distinguishing feature compared to Forssell and Cromer. The server of claim 1 sends the same post-speech packets to a plurality of downlinks (i.e. client devices). The Applicants submit that Cromer discusses only a client-specific ping packet.

Further, based on the above-mentioned facts it is submitted that the documents of Forssell and Cromer do not disclose or suggest post-speech packets of the present application. It is also submitted that the references cited are not combinable in a way which could lead to the present invention disclosed in claims 8 and 15.

Independent claim 12 is rejected as being unpatentable over Forssell in view of Schieder (EP 1139613). The Examiner admits that the client device of Forssell does not recognize post-speech packets. To correct this deficiency he uses standard uplink acknowledgement or uplink negative acknowledgement messages disclosed in Schieder. However, it is noted that these messages are transmitted on a control packet channel not in a packet data channel assigned to mobile terminal.

Therefore, the Applicants submit that these signaling messages are not comparable to the post-speech packets of the present application which are always transmitted on the packet data channel.

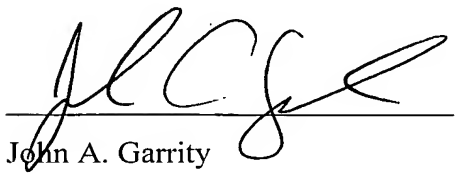
In addition, to emphasize the distinction between the present invention and the references the Applicants note that claim 12 has been amended for clarification.

Based on the above-mentioned facts it is submitted that the references cited can not be seen to disclose or suggest claim 12. The Applicant contends that, for at least the reasons already stated, even if the references were combined, which is not agreed to as proper, the combination would still not disclose or suggest claim 12.

It is respectfully submitted that all dependent claims are allowable at least due to their dependence on the independent claims, as stated above.

Based on the above explanations and arguments, it is clear that the references cited cannot be seen to disclose or suggest claims 1-30. The Examiner is respectfully requested to reconsider and remove the rejections of claims 1-22 and to allow all of the pending claims 1-30 as now presented for examination. Should any unresolved issue remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted:



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